REMARKS

The Examiner is thanked for the indication that claims 13-22 and 33-38 are allowable over the prior art of record and that claims 5-6 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-38 are pending in the application. Claims 1, 13, 20, 23, 29, 33, and 36 are independent. In the foregoing Response, Applicants have not amended, canceled, or added any claims.

Rejection of Claims 1-4, 7-12, and 23-32 Under 35 U.S.C. §102(b)

In the Office Action, the Examiner rejected claims 1-4, 7-12, and 23-32 under 35 U.S.C. § 102(b) as being anticipated by D.E. Newland (Journal of Vibration and Acoustic, "Wavelet Analysis of Vibration, Part 1, Theory") (hereinafter "Newland"). A claim is anticipated only if each and every element of the claim is found in a reference. (MPEP §2131 *citing Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628 (Fed. Cir. 1987)). The identical invention must be shown in as complete detail as is contained in the claim. Id. *citing Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989)). Applicants respectfully traverse the rejection.

The Examiner states that Newland teaches a technique for applying a wavelet to a radio frequency signal under test (sample) to extract (decompose) parameter from the RF signal (f(x)) using a wavelet transform (w(x)) of the RF signal (pages 409, 414). Applicants respectfully disagree with the Examiner's interpretation of Newland.

Applicants respectfully submit that Newland is not properly applied to the claimed invention. Newland appears to be directed to wavelet analysis of vibration. The problem addressed in Newland is that conventional spectral analysis cannot be used successfully when monitoring vibration of sound pressure recorded from speech and music or vibration occurring during the start-up of an engine, for example, because conventional techniques cannot handle occasional transient impulses. The solution proposed in Newland is to use a computer or other external device to analyze the vibration. This is in contrast to embodiments of the present invention that provide on-chip analysis and measurement techniques. Newland does not address

integrated circuits at all, let alone on-chip analysis and measurement. Applicants respectfully submit therefore that Newland is not properly applied to the claimed invention.

Even, assuming for the sake of argument, that Newland is properly applied to the claimed invention, Applicants respectfully submit that Newland fails to show the identical invention as that of claim 1. For example, Newland fails to teach "applying a wavelet to a radio frequency (RF) signal under test" and "extracting parameters from the RF signal using a wavelet transform of the RF signal" as recited in independent claim 1. As discussed above, this is because Newland is not concerned with RF signals but with vibration in speech and machinery. In making the rejection, it appears that the Examiner is equating vibration, which typically has a frequency range around 100Hz to a few KHz, with radio frequency (RF) signals, which commonly have clocks and data transmission rates in the gigahertz (GHz) range. Applicants respectfully submit that the Examiner's equating of vibration with radio frequency (RF) signals is improper and that vibration and radio frequency (RF) signals are not identical. Accordingly, Newland fails to show the identical invention in as complete detail as is contained in independent claim 1.

Because Newland is not properly applied to and/or fails to teach the identical invention in as complete detail as is contained in independent claim 1, Applicants therefore respectfully submit that the Examiner has failed to make out a *prima facie* case of anticipation of claim 1 with respect to Newland and that claim 1 therefore is patentable over Newland. Claims 2-4 and 7-12 properly depend from claim 1, and as a result are patentable over Newland for at least the same reasons that claim 1 is patentable over Newland. Accordingly, Applicants respectfully request that the Examiner reconsider and remove the rejection to claims 1-4 and 7-12.

With respect to independent claims 23 and 29, the Examiner states that "the rejection for a system/machinery would [be] encompass[ed] by the method rejection as set forth above, since ***the radio frequency could be emitted*** from many machinery vibration monitoring or sound as indicated in page 409, and providing a wavelet tool in the technique to extract parameters by wavelet transform (page 414)" (emphasis added). Applicants respectfully disagree with the Examiner's application of MPEP §2131 to claims 23 and 29. Applicants respectfully submit that the test is not whether an element of a claim ***could be present*** in a reference, as articulated by the

Examiner, but whether each and every element of the claim ***is in the reference either expressly or inherently***.

Applicants respectfully submit that if the Examiner is arguing that a radio frequency (RF) signal is inherent in Newland that the Examiner has failed to meet the burden of proof. To establish inherency, the Examiner must provide rationale or evidence tending to show inherency. MPEP §2112 IV. The extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. (MPEP §2112IV *citing In re Oelrich*, 666 F.2d 578, 581-582 (CCPA 1981)). An Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the prior art (emphasis in original). (MPEP §2112IV *citing Ex parte Levy*, 17 USPQ.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Applicants respectfully submit that the Examiner has provided no such extrinsic evidence or rationale making it clear that Newland inherently teaches that a radio frequency could be emitted from machinery vibrations. Page 409 of Newland, which the Examiner cites for the proposition, does not speak to radio frequencies. It only speaks to sound pressure of recorded speech and vibration during start-up of an engine. As discussed above, these vibrations typically have a frequency range around 100Hz to a few KHz. The Examiner has provided no other proof that radio frequency signals frequency in the gigahertz (GHz) range necessarily flow from the mechanical vibrations. In fact, the Examiner's assertion that the radio frequency ***could be*** emitted from machinery vibration is in and of itself an indication that the radio frequency signal ***does not necessarily flow*** from mechanical vibrations. Applicants respectfully submit therefore that the Examiner has not met the burden of showing that a radio frequency (RF) signal is inherent in Newland.

Because the Examiner has not properly demonstrated that a radio frequency (RF) signal is taught in Newland, either expressly or inherently, Applicants respectfully submit that the Examiner has failed to make out a *prima facie* case of anticipation of claims 23 and 29 with respect to Newland and that claims 23 and 29 are patentable over Newland. Claims 24-28 and

30-32 properly depend from claims 23 and 29, respectively, and as a result are patentable over Newland for at least the same reasons that claims 23 and 29 are patentable over Newland. Accordingly, Applicants respectfully request that the Examiner reconsider and remove the rejection to claims 23-32.

CONCLUSION

Applicants submit that all grounds for rejection have been properly traversed and that the application is in condition for allowance. The Examiner is invited to telephone the undersigned representative if the Examiner believes that an interview might be useful for any reason.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Date: 7/5/2005

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